RECEIVED CENTRAL FAX CENTER

JUN 2 2 2005

Atty Dkt, No.: 10010186-1 USSN: 09/848,869

AMENDMENTS

In the claims:

1-6. (Canceled)

- 7. (Currently amended) A method for detecting the presence of a target nucleic acid, comprising:
- (a) hybridizing a probe with an attached transition metal ligand complex to said target nucleic acid to produce an initial complex;
- (b) adding a <u>free</u> metal ion to the initial complex to produce an electrically conductive complex; and,
- (c) applying an electrical potential to the electrically-conductive complex to produce a measurable light signal.

8. (Canceled)

- 9. (Previously presented) A method as recited in claim 7, wherein said transition metal-ligand complex has a central atom selected from the group consisting of osmium and ruthenium.
- 10. (Original) A method as recited in claim 7, wherein the metal added in step (b) is selected from the group consisting of zinc, cobalt and nickel.
- 11. (Previously presented) A method as recited in claim 7, wherein said measurable light_signal is a chemiluminescent signal.
- 12. (Previously presented) A method as recited in claim 7, wherein said measurable light signal is an electrochemiluminescent signal.
- 13. (Previously presented) A method as recited in claim 7, wherein a plurality of metal ions is added to said electrically conductive complex.

Atty Dkt. No.: 10010186-1 USSN: 09/848,869

14. (Previously presented) A method as recited in claim 7, wherein a plurality of different metal ions is added to said electrically conductive complex.

15. (Canceled)

16. (Currently amended) A method for detecting the presence of a nucleic acid target, comprising:

independently adding together a probe having an attached transition metal-ligand complex, a target capable of hybridizing to the probe, and a <u>free</u> metal ion to produce an electrically-conductive complex; and

applying an electrical potential to said electrically conductive complex to detect the presence of said nucleic acid target.

17. (Canceled)

- 18. (Original) A method as recited in claim 16, wherein said transition metalligand complex is selected from the group consisting of osmium and ruthenium with organic coordinating ligands.
- 19. (Original) A method as recited in claim 16, wherein the metal ions are selected from the group consisting of zinc, cobalt and nickel.
- 20. (Currently amended) A method for detecting the presence of a nucleic acid target, comprising:
- (a) hybridizing a probe having an attached transition metal-ligand complex with said target to produce an initial complex, wherein the transition metal-ligand complex produces a light signal in response to application of an electric potential;
- (b) adding a <u>free</u> metal ion to the initial complex to produce a final electrically conductive complex; and
- (c) applying the electric potential through the final complex to the transition metalligand complex, to cause the label to produce the light signal.

Atty Dkt. No.: 10010186-1 USSN: 09/848,869

21. (Canceled)

- 22. (Currently amended) A method for detecting the presence of a target nucleic acid, comprising:
- (a) hybridizing a probe attached to a substrate with an attached transition metal ligand complex to said target nucleic acid to produce an initial complex;
- (b) adding a <u>free</u> metal ion to the initial complex to produce an electrically conductive complex; and,
 - (c) applying an electrical potential to the electrically-conductive complex to produce a measurable light signal.
- 23. (Currently amended) A method for detecting the presence of a nucleic acid target, comprising:

independently adding together a probe attached to a substrate having an attached transition metal-ligand complex, a target capable of hybridizing to the probe, and a <u>free</u> metal ion to produce an electrically-conductive complex; and

applying an electrical potential to said electrically conductive complex to detect the presence of said nucleic acid target.

- 24. (Currently amended) A method for detecting the presence of a nucleic acid target, comprising:
- (a) hybridizing a probe attached to a substrate having an attached transition metalligand complex with said target to produce an initial complex, wherein the transition metalligand complex produces a light signal in response to application of an electric potential;
- (b) adding a <u>free</u> metal ion to the initial complex to produce a final electrically conductive complex; and
 - (c) applying the electric potential through the final complex to the transition metalligand complex, to cause the label to produce the light signal.